

# EXTENDED PHASE ONE HABITAT SURVEY

## Land at Cornorion Fawr Powys



**GRID REFERENCE: SJ109220**

Report for Roger Parry and Partners



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## 1 INTRODUCTION

### 1.1 BACKGROUND

Arbor Vitae were commissioned to carry out a Phase One Habitat Survey, including a Protected Species assessment, of land at Cornorion Fawr, Pen-y-Garnedd. This land will be the subject of a planning application for the construction of a new free range poultry building and associated infrastructure.

This report presents the results of a field survey carried out on 5 October 2017.

### 1.2 DETAILS OF PROPOSED WORKS

The work will involve the construction of one new poultry building, along with an access track and feed bins (see Figure 2). The building has a footprint of 1600 square metres and will house 16000 free range chickens. A ranging area of will be provided over adjacent grassland and fencing will be erected to both protect chickens from predators and protect natural features such as hedgerows from excessive grazing. Access will be created from the minor road at the edge of the field and will require the removal of a 30 metre section of hedgerow. Construction of the building will result in the loss of 40 metres of hedgerow.

### 1.3 SCOPE OF SURVEY

This report sets out to establish the base-line ecological condition of the site and to identify and evaluate any potential impacts which the scheme may have, taking account of any mitigation and enhancement to the ecology which the scheme can offer.

Construction of the building inevitably involves a change of land use and therefore has the potential to remove existing habitat and to physically disturb protected species, if present. The operation of the ranging area could have implications for habitats and species.

The nature of the immediate and surrounding habitat indicated that the following species could theoretically be affected by physical disturbance of habitats.

Protected or priority species potentially affected:

- Badgers
- Bats
- Breeding birds
- Brown hare
- Great crested newts
- Hedgehogs
- Otters



This report sets out the results of the field surveys and desk study, along with an assessment of potential ecological impacts of the construction of the new building and the creation of a ranging area for poultry. The potential impact of the spreading of manure is not considered in this report.

## 2 SITE DESCRIPTION

### 2.1 LOCATION AND LANDSCAPE

The proposed construction site is located on a grass field on a working beef and sheep farm 3 kms due south east of the village of Pen y Bont Fawr (see Figure 1 Location plan). The site will occupy the flat, lower section of a sloping field. The area as a whole is typical of an upland stock farm. Fields are all in grass and are generally small in scale with wide, often tall, hedges separating them. Small patches of broad-leaved woodland are frequent, as also are patches of scrub and lines of trees along streams.

The land lies at approximately 182 metres AOD. The site lies within 20 metres of the existing farm buildings in the valley of Cwm Nant Fyllon. Land rises to the north of the application site to 450 metres above Pen y Bont Fawr and south to a long ridge at 250 metres AOD.

A large, broad-leaved woodland, chiefly of beech, occupies a valley-side site 156 metres to the north of the proposed site.

## 3 SURVEY METHODOLOGY

### 3.1 DESK STUDY

A number of data sets were investigated to ascertain the presence or otherwise of nearby land designations, scheduled sites or protected species. Sources which were used included MAGIC, Forestry Commission Land Information search and BIS.

### 3.2 FIELD SURVEY

Two visits were made to the site on the 5 and 25 October 2017 to survey the property. The site was surveyed to identify specific habitats and potential opportunities for protected species. Adjacent land was inspected for evidence of key habitats or key species.

An assessment of the available habitats both on and adjacent to the site led to consideration of the potential of the site for the following protected and priority species:

- Badger



- Bats
- Breeding birds
- Brown hare
- Great crested newts
- Hedgehog
- Otter

A number of other priority species (mainly birds) have been recorded within 1000 metres of the site. These are listed in Appendix 2.

The survey methodology was tailored to evaluate the area for these species.

### ***Badgers***

An area within 50 metres of the site was closely searched for the following signs of badger activity: setts, tracks and footprints, latrines and snuffle holes.

### ***Bats***

Any nearby habitat such as old trees containing cracks and crevices were inspected from the ground for any signs of use.

### ***Breeding birds***

The habitat was assessed in terms of suitability for breeding birds, including any nearby hedgerows or trees.

### ***Brown hare***

The site was assessed for its potential suitability for this species.

### ***Great crested newts***

A map and ground search was made for any areas of open water within 250 metres of the construction site. These were assessed for their suitability as breeding sites for great crested newts using the Habitat Suitability Index.

### ***Hedgehogs***

The suitability of the site to provide foraging or breeding habitat for this species was assessed.

### ***Otters***

The site was assessed for its potential suitability for this species.



### 3.3 **PERSONNEL**

The survey was carried out by Will Prestwood BSc Hons: an experienced ecologist and surveyor at Arbor Vitae Environment.

### 3.4 **CONSTRAINTS**

There were no constraints to the survey being carried out successfully.

## 4 **SURVEY RESULTS**

### 4.1 **DESK STUDY**

#### **Nature conservation or other designations**

There are no designated nature conservation sites within the search area of 1km radius around the site. Several areas identified as ancient woodland sites lie within one kilometre of the site.

The nearest sites of ecological importance are:

Pen y Garnedd Mine SSSI 1.6 kms to the north  
Coed yr Allt woodland SSSI 1.8 kms to the south east

No sites with statutory or non-statutory designations within the area would be directly affected by this development.

#### **Protected species**

A list of Priority species (including protected species) and species of Conservation Concern which have been recorded within one kilometre of the site is provided in Appendix 2.

No protected species other than bluebell and otter have been recorded within 1 km of the site, although it is highly likely that bat species are associated with the nearby woodland.

Great crested newts have not been recorded within 1.0 km.

Red squirrels have been recorded within 2 kms of the site but this record dates from 1960.



## 4.2 HABITATS ON SITE

### *Improved grassland*

The new poultry building will occupy land which is currently improved grassland and which is closely grazed by sheep and cattle. The sward contains a very limited range of species.

### *Hedgerows (see Site Plan for location)*

Hedgerow A: a roadside hedge comprising mixed native species (hawthorn, blackthorn, hazel), a 30 metre section of which will be removed to create a visibility splay.

Hedgerow B: a derelict hedge largely reduced to occasional stumps of mature shrubs. Heavily grazed and browsed by stock.

## 4.3 HABITATS ON ADJACENT LAND

### *Improved grassland*

Five adjacent fields will provide the ranging area for the chickens. These fields are improved grassland with a limited range of species.

### *Running water*

The nearest stream runs 90 metres to the south of the site.

### *Standing water*

One pond is situated within 60 metres of the proposed building. This is a small, shallow pond adjacent to the existing farmhouse. It is heavily silted and, as a result, is subject to encroaching marginal vegetation which is slowly reducing the area of open water. Marginal species include brooklime, floating sweet grass, bur-reed, soft rush, fool's watercress and yellow iris.

### *Broadleaved woodland*

An area of broad-leaved woodland on an ancient woodland site lies 95 metres to the north west of the new building and shares a boundary with the ranging area. The woodland consists of mature oak and beech with occasional ash. The understorey is very poor and only occasional hazel exists. The woodland has been heavily grazed in the past and the ground flora is very poor. Fencing exists along the foot of the slope but much of the remaining boundary is unprotected against stock. Chickens will not gain access to the woodland and there will be no physical impact on this habitat.



#### 4.4 **PROTECTED SPECIES**

##### ***Badgers***

No badger setts are located within 50 metres of the site and there is no evidence that badgers use the site for foraging or for access. A large badger sett is located within the nearby woodland although this appears to be unoccupied at present.

##### ***Bats***

No potential bat roosts are present on or adjacent to the site. The fringe of the nearby woodland and lines of hedgerow may provide foraging habitat.

##### ***Breeding birds***

The site provides few opportunities for breeding birds. The roadside hedgerow is sparse but may provide nest sites for common farmland birds.

Species recorded on the site during the survey included several which are likely to be present and breeding nearby during the spring and summer. These include:

Blackbird  
Dunnock  
Wren  
Robin  
Chaffinch  
Blue tit  
Great tit  
Wood pigeon  
Carrion crow

##### ***Great crested newts***

A Habitat Suitability Index was calculated to assess the potential of the nearby pond to support GCN.

The HSI score was 0.665 indicating that the pond holds 'average' potential to support great crested newts. In the 10km grid square SJ12, only two grid squares have returned records of GCN to the recording system, ADERYN. These records are both approximately 8 kms to the east.

It would appear very unlikely that GCN would be present on this site.



**Otters**

The nearest record of otters comes from a location 700 metres to the west of the site, presumably associated with the Cwm Nant Fyllon stream. The site offers no suitable habitat for otters, although it is likely that the nearby pond is explored by otters, given its proximity to the stream.

**4.5 PRIORITY SPECIES****Brown hare**

This species is occasionally seen in the district but is unlikely to occur close to the existing farmstead.

**Hedgehog**

Hedgehogs have been recorded approximately 2 kms to the east of the site. However, the site offers little suitable habitat for this species. The roadside hedge may provide a migration route for hedgehogs but offers little in the way of dense, secure cover.



## 5 EVALUATION OF RESULTS AND POTENTIAL ECOLOGICAL IMPACT

### 5.1 HABITATS

#### Improved grassland

The main habitat associated with this site is improved grassland. This is of negligible ecological interest and has little potential to support protected species.

#### Hedgerows

A small length (30 metres) of roadside hedgerow (A) will be removed to create access. Although the hedge is of poor structural quality and is subject to disturbance by traffic, all native hedgerows are regarded as BAP habitats reflecting their value to wildlife.

Removal of the hedge may disturb nesting birds and must be carried out outside the nesting season. Removal of the hedge will necessitate the planting of compensatory replacement hedgerows on the site.

Removal of a 40 metre section of Hedgerow B will have minor ecological impact due to the extremely poor quality of the hedge.

#### Trees

One mature alder tree on the fringe of the site, adjacent to the pond, is unlikely to experience any negative impact from the proposals.

#### Woodland

Nearby areas of woodland will be unaffected by the proposed development, as long as suitable fencing is erected to ensure that the woodland is not used as part of the ranging area by chickens.

#### Open water

The nearby pond will remain unaffected by the proposals, assuming that all drainage will be routed away from the pond.

### 5.2 PROTECTED SPECIES

#### Badgers

No active setts were recorded within 50 metres of the site. The development will have no impact on badgers.



**Bats**

It is likely that bats use the adjacent hedgerows and nearby woodland fringe along which to forage. Any increased illumination of the site may disrupt flight lines but this can be minimised by appropriate exterior lighting systems.

**Breeding Birds**

One of the bird species recorded during the survey, dunnock, is listed as a UK BAP species. Dunnock is also listed on the amber list of Birds of Conservation Concern.

The nearby hedgerows provide a possible nest site for this species. There may be some temporary disturbance to breeding birds if construction work takes place when birds are breeding but this is likely to be negligible. The removal of any lengths of hedgerow should be within the period September to March to avoid the nesting season. If this is not possible, a site check should be carried out by an ecologist before work starts in order to ensure that no birds are nesting.

**Great crested newts**

The HSI score indicates that the pond holds 'average' potential for GCN. However, given the extremely low occurrence of GCN in this locality and the unsuitability of the construction site as terrestrial habitat for GCN, the risk to this species is regarded as negligible.

**Otters**

No impact on this species is likely.

**5.3 PRIORITY SPECIES****Brown hare**

No habitat which could be considered suitable for brown hares will be affected by the construction of the new building.

**Hedgehogs**

No habitat which could be considered suitable for hedgehogs will be affected by the construction of the new building.



## 6 MITIGATION AND ENHANCEMENT

### 6.1 HABITAT MITIGATION

The loss of 70 metres of hedge will be mitigated by the restoration of 90 metres of the remaining derelict section of Hedgerow B.

The potential for increased grazing pressure by chickens to damage hedgerow ground flora can be readily mitigated through double-fencing of all adjacent hedgerows. The protection of hedgerows which are currently grazed and browsed by sheep and cattle will be a significant ecological gain.

### 6.2 PROTECTED SPECIES MITIGATION

#### *Bats*

Artificial external lighting should be largely unnecessary but, if needed, should be designed to minimise illumination of the adjacent habitats which may be used by bats for foraging.

#### *Breeding birds*

Although disturbance to breeding birds will be negligible, hedgerow removal should be carried out outside the nesting season.

### 6.3 ECOLOGICAL ENHANCEMENT

The following measures are recommended in order to create ecological enhancements:

- New native hedgerow planting to provide increased habitat connectivity and nesting sites.
- Restoration of Hedgerow B by fencing and replanting/coppicing.
- All perimeter hedgerows and other hedgerows within the ranging area to be fenced to prevent access by chickens.
- Erection of bird and bat boxes on or near the site to improve opportunities for these species.



## 7 SUMMARY AND CONCLUSION

An application has been submitted for permission to construct a new building to house free-range poultry and to install associated infrastructure including access track and feed bins. This change of land-use could have implications for habitats and species of ecological significance, thus necessitating an assessment of the ecological value of the site.

In order to evaluate the potential ecological impact of this development, Arbor Vitae were invited to carry out an Extended Phase One Habitat Survey. This included an assessment of the value or potential of the site to support protected species.

The site was surveyed on the 5 October 2017. A desk study was carried out to ascertain existing nature conservation designations and known records for protected species within the vicinity.

No statutory sites of ecological interest lie within one kilometre of the site and the nearest SSSI is 2.2kms away

The land affected by the proposal, including the site for the new building, the ranging area and the access road, all lie on improved grassland of minimal ecological value.

The site (including the ranging area) is bounded by and intersected by hedgerows, most of which are mixed, native species hedgerows. They are mainly in poor structural condition due to grazing pressure and lack of management. Nevertheless, these are recognised as BAP habitats and are of high ecological value. A 30 metre length of roadside hedge will need to be removed to create access and a further 40 metres of Hedgerow B removed on the construction site.

All the hedgerows are vulnerable to increased grazing pressure from chickens.

An assessment was carried out for badgers, bats, breeding birds, brown hares, great crested newts, hedgehogs and otters. The survey concluded that no habitat of potential value to badgers, brown hares, great crested newts, hedgehogs or otters would be lost. The loss of 70 metres of hedgerow may have an impact on breeding birds. Exterior lighting could impact bat foraging behaviour and needs to be avoided or restricted. The nearby pond has 'average' potential to support great crested newts but the species has not been recorded locally and the proposed construction site is not suitable terrestrial habitat for this species.

Mitigation for habitat loss will include restoration of Hedgerow B and the double-fencing of all adjacent hedgerows to prevent grazing of ground flora by chickens. Additional native hedgerow planting will be carried out along the access track.

Mitigation and enhancement for protected species includes ensuring that there is no increase in illumination of adjacent hedgerows or trees, removal of hedgerow outside the nesting season and the erection of bird nesting boxes and bat roosting boxes.

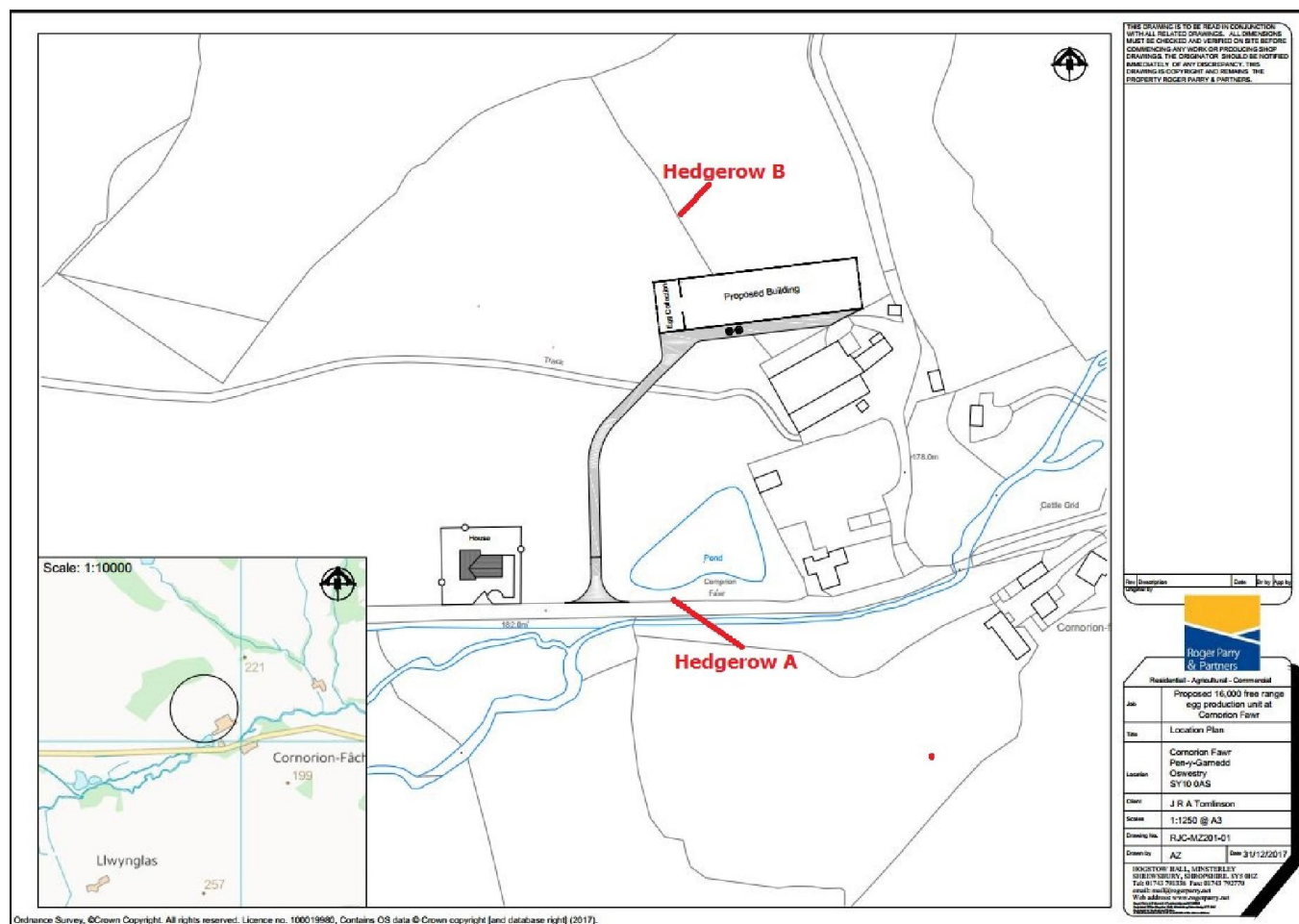


FIGURE 1: LOCATION



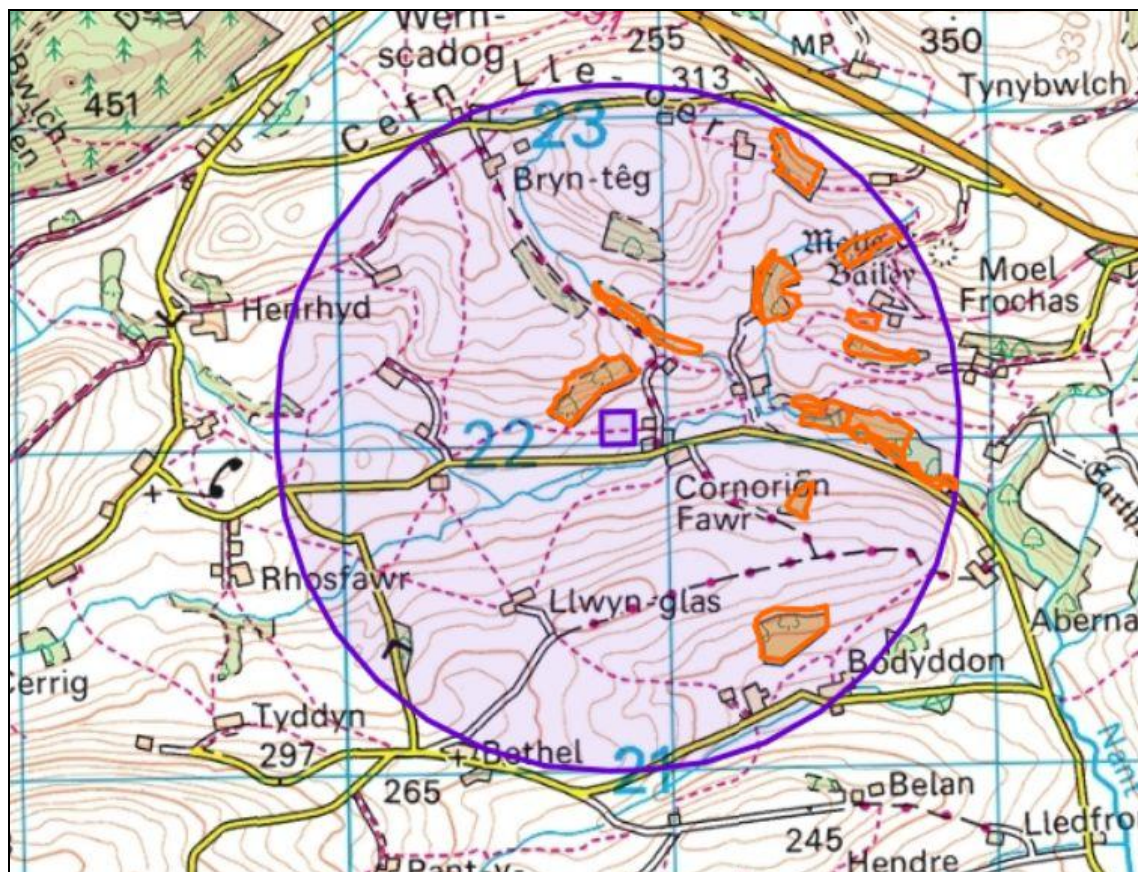
Arbor Vitae Environment Ltd  
 Lower Betton Farm  
 Cross Houses  
 Shrewsbury  
 Shropshire  
 SY56JD

FIGURE 2: SITE LAYOUT







Arbor Vitae Environment Ltd  
 Lower Betton Farm  
 Cross Houses  
 Shrewsbury  
 Shropshire  
 SY56JD




FIGURE 3 LOCAL SITES OF NATURE CONSERVATION IMPORTANCE (ANCIENT WOODLANDS) (SOURCE: BIS)



Arbor Vitae Environment Ltd  
 Lower Betton Farm  
 Cross Houses  
 Shrewsbury  
 Shropshire  
 SY56JD

APPENDIX 1: PHOTOGRAPHS

|   |   |
|---|---|
|    | <p>PROPOSED CONSTRUCTION SITE FROM ACCESS POINT</p>   |
|   | <p>PROPOSED CONSTRUCTION SITE IS AT FAR END OF THIS FIELD ADJACENT TO FARM BUILDINGS (SEEN FROM WEST)</p> |
|  | <p>ACCESS POINT FROM MINOR ROAD</p>   |
|  | <p>POND NEAR TO THE SITE</p>  |

|   |   |
|---|---|
|    | <p>ROADSIDE HEDGEROW A – 30 METRES<br/>TO BE REMOVED</p>  |
|    | <p>PART OF RANGING AREA ON HILLSIDE<br/>TO THE NORTH WEST</p>   |
|   | <p>NEARBY WOODLAND TO THE NORTH</p>   |
|  | <p>VIEW FROM WOODED SLOPE TO THE<br/>NORTH DOWN TO PROPOSED<br/>CONSTRUCTION SITE NEAR FARM<br/>BUILDINGS</p> |



HEDGEROW B. DERELICT HEDGE,  
LOWER SECTION TO BE REMOVED ON  
CONSTRUCTION SITE. REMAINDER TO  
BE RESTORED AND FENCED.



## APPENDIX 2 PRIORITY SPECIES WITHIN 1000 METRES OF SITE

| Dist.<br>(m) | Species                         | Taxon<br>Group    | Cat. | Recorder          | Grid Ref. | Location          | Date               |
|--------------|---------------------------------|-------------------|------|-------------------|-----------|-------------------|--------------------|
| 200          | Lepus europaeus<br>(Hare)       | terrestrial...    | CAT1 | P Dunning         | SJ108222  | Pen-y-Bryn ...    | 25/08/1977         |
| 570          | Lepus europaeus<br>(Hare)       | terrestrial...    | CAT1 | P Dunning; ...    | SJ1022    | Bryn-Teg          | 4 records,<br>...  |
| 652          | Hyacinthoides non-<br>script... | flowering<br>p... | CAT1 | RA Dawes          | SJ1021    | Llanfyllin ...    | 22/04/2015         |
| 728          | Lutra lutra (Otter)             | terrestrial...    | CAT1 | Unknown           | SJ101218  | Afon Cain t...    | July 2009 -<br>... |
| 761          | Lutra lutra (Otter)             | terrestrial...    | CAT1 | Phil Morgan       | SJ101217  | Nant Fyllon...    | 07/05/2002         |
| 848          | Pyrrhula pyrrhula<br>(Bull...   | bird              | CAT1 | P Dunning         | SJ114214  | Bodyddon<br>Wo... | 26/08/1977         |
| 851          | Hyacinthoides non-<br>script... | flowering<br>p... | CAT1 | RA Dawes          | SJ1121    | Llanfyllin ...    | 22/04/2015         |
| 905          | Cuculus canorus<br>(Cuckoo)     | bird              | CAT1 | MWT/Summer<br>... | SJ117219  | Rhoslan, Gu...    | 12/04/1998<br>...  |
| 905          | Dendrocopos minor<br>(Less...   | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  |                   | October<br>199...  |
| 905          | Fringilla<br>montifringilla...  | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  |                   | October<br>199...  |
| 905          | Numenius arquata<br>(Curle...   | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  | Rhoslan, Gu...    | 2 records,<br>...  |
| 905          | Passer domesticus<br>(Hous...   | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  | Rhoslan, Gu...    | 3 records,<br>...  |
| 905          | Passer montanus<br>(Tree S...   | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  |                   | October<br>199...  |
| 905          | Prunella modularis<br>(Dun...   | bird              | CAT1 | MWT Winter ...    | SJ117219  | Rhoslan, Gu...    | 3 records,<br>...  |
| 905          | Sturnus vulgaris<br>(Starl...   | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  |                   | October<br>199...  |
| 905          | Turdus iliacus<br>(Redwing)     | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  |                   | October<br>199...  |



| Dist.<br>(m) | Species                         | Taxon<br>Group    | Cat. | Recorder          | Grid Ref. | Location       | Date              |
|--------------|---------------------------------|-------------------|------|-------------------|-----------|----------------|-------------------|
| 905          | Turdus philomelos<br>(Song...   | bird              | CAT1 | MWT/Summer<br>... | SJ117219  | Rhoslan, Gu... | 2 records,<br>... |
| 905          | Turdus pilaris<br>(Fieldfa...   | bird              | CAT1 | WINTER<br>BIRD... | SJ117219  |                | October<br>199... |
| 1118         | Passer domesticus<br>(Hous...   | bird              | CAT1 | Unknown           | SJ103210  | Llanfyllin ... | 26/01/2008<br>... |
| 1118         | Plecotus auritus<br>(Brown...   | terrestrial...    | CAT1 | Roger Matth...    | SJ103210  | Bethel Chap... | 2 records,<br>... |
| 1492         | Hyacinthoides non-<br>script... | flowering<br>p... | CAT1 | A.J. Hotchk...    | SJ1023    | Penygarnedd    | 19/07/2012        |
| 1492         | Mustela erminea<br>(Stoat)      | terrestrial...    | CAT1 | Montgomerys...    | SJ1023    | Penygarnedd    | 3 records,<br>... |
| 1492         | Plecotus (Long-<br>eared Ba...  | terrestrial...    | CAT1 | M. Packwood       | SJ1023    | Penygarnedd    | 1985              |
| 1492         | Rhinolophus<br>hipposideros...  | terrestrial...    | CAT1 | M. Packwood...    | SJ1023    | Penygarnedd... | 2 records,<br>... |
| 1492         | Sciurus vulgaris<br>(Red S...   | terrestrial...    | CAT1 | GR Hill           | SJ1023    | Penygarnedd    | 13/06/1960        |
| 1589         | Hyacinthoides non-<br>script... | flowering<br>p... | CAT1 | RA Dawes          | SJ1020    | Llanfyllin ... | 09/05/2015        |

